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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,493	08/25/2003	Joerg Mellmann	INTECH 3.0-088 03 P 50512	4246
48154	7590	10/20/2005	EXAMINER DIMYAN, MAGID Y	
SLATER & MATSIL LLP 17950 PRESTON ROAD SUITE 1000 DALLAS, TX 75252			ART UNIT 2825	

DATE MAILED: 10/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

E11

Office Action Summary	Application No. 10/648,493	Applicant(s) MELLMANN, JOERG	
	Examiner Magid Y. Dimyan	Art Unit 2825	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2003 and 11 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>08/25/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This is with regards to Application No. 10/648,493 filed 25 August 2003, and to the formal drawings filed 11 March 2004. Claims 1 – 21 are pending in this Application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 – 21 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,574,784 B1 to Lippincott et al. (hereinafter, "Lippincott").

4. Referring to claims 1, 11 and 21, Lippincott discloses a method (claim 1), a computer program (claim 11) and an apparatus (claim 21) for correcting rule violations of a photomask using a digital representation of the photomask (see col. 1, lines 13 – 51) comprising: (a) identifying violating areas of the photomask that include areas violating a minimum width rule and areas violating a minimum space rule (see also col. 1, line 5 – col. 2, line 3; col. 3, lines 5 – 43; Fig. 1); and (b) manipulating (i.e., biasing) each of the violating areas differently based on the placement of the violating area relative to a design shape of the layout pattern to be imaged using the photomask for

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the purpose of eliminating the rule violations (see Figs. 4, 5, 10, 12, 13, 14; col. 4, lines 28 – 56, which show how areas can be biased differently, depending to space and width). Thus, Lippicott clearly cites all the claimed limitations.

5. Pursuant to claims 2 – 6 and 12 – 16, see (4) above as well as col. 6, lines 3 – 44; col. 7, lines 8 – 49; Figs. 16, 17, which teach all the claimed elements pertaining to the method and computer program for manipulating each of the violating areas differently (i.e., different biases) depending on whether these violations are for minimum widths, minimum spaces, and for areas lying inside or outside the design shape.

6. As per claims 7 and 17, see (4) and (5) above, as well as Figs. 14 and 15; col. 7, lines 8 – 49, which teach the limitations pertaining to enlarging, removing and filling an area which violates design rules, as claimed.

7. Regarding claims 8 and 18, see also col. 1, lines 32 – 52, which cite how OPC is performed on the photomask prior to identifying violating areas, as claimed.

8. As for claims 9 – 10 and 19 – 20, see (4) – (6) above, as well as Figs. 12, 14, 15; col. 6, lines 20 – 64, which disclose the elements related to violating minimum space rules between areas, as claimed.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Pub. No. U.S. 2005/0022151 A1 to Rittman et al. discloses a photomask and IC manufactured by eliminating design rule violations during construction of a mask layout block, whereby a feature is defined in a mask pattern file generated by analyzing a selected position for a polygon during construction of a mask layout and determining if the selected position creates a design rule violation based on a design rule from a technology file.

U.S. Patent No. 6,816,997 B2 to Teh et al. teaches an improved method and system for performing a design rule check on proposed IC layout, and for creating customized design rule check command files, depending on the different regions having different kind of features (i.e., memory or logic).

U.S. Patent No. 6,523,162 B1 to Agrawal et al. cites a general purpose shape – based layout processing scheme for IC layout modification used in photolithography that also includes OPC.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Magid Y. Dimyan whose telephone number is (571) 272-1889. The examiner can normally be reached on Monday - Friday 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on (571) 272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

myd
07 October 2005



Magid Y Dimyan
Examiner
Art Unit 2825

A. M. Thompson
Primary Examiner
Technology Center 2800

